



THE TRUE ECONOMIC IMPACT OF THE “MISSOULA PLAN” FOR INTERCARRIER COMPENSATION:

An Assessment Based on Reality

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Executive Summary

The *Missoula Plan* for resolving the various intercarrier compensation and access charge disparities calls generally for reductions in local exchange carrier (“LEC”) switched access charges and certain other usage-based fees, with incumbent LECs (“ILECs”) being afforded the opportunity to offset these rate decreases, dollar-for-dollar, on an entirely *revenue-neutral* basis by increases in various fixed monthly charges. The Plan will almost certainly impact consumers economywide, and assessing these impacts (whether negative or positive) is a critical element in evaluating its overall reasonableness. Richard Clarke and Thomas Makarewicz (“CM”), both of AT&T, have attempted to show that adoption of *Missoula* would produce sizable gains in aggregate economic welfare, concluding that “the economy-wide benefits of these various reforms may reach \$54 billion during the eight year period after plan initiation.” The CM model might potentially be useful for gauging the end-result of the *Missoula Plan*, but only if the underlying assumptions and input data were valid. However, the specific scenario CM have examined is based upon flawed assumptions and data (some of which directly contravene the Plan itself), resulting in a grossly overstated estimate of any economywide benefit.

Critical to the CM model is its assumption that 100% of the access charge reductions prescribed by *Missoula* will be flowed through to consumers in the form of lower prices. But the Plan itself provides for no such mechanism, and the prevailing state of market concentration and integration make 100% flow-through – or anything close to it – extremely unlikely. CM assume that states adopt and implement *Missoula* access charge reductions immediately. They rely upon own-price elasticities of demand for toll and wireless services that were developed in the distant past, and which are clearly no longer applicable to current pricing and market conditions. CM also assume that all toll and wireless minutes are priced and sold on a per-minute basis, ignoring the preponderance of block-of-time and unlimited usage plans and service bundles. All of these assumptions, individually and in combination, contribute to a grossly exaggerated assessment of *Missoula*’s economic benefits. CM also misapply regional multiplier effects that further inflate those overstatements of consumer benefits. When the various flawed assumptions are replaced with more realistic inputs, rather than showing a \$54-billion consumer benefit, the model suggests that adoption of *Missoula* could result in massive *negative* economic impacts in the range of \$39- to \$44-billion. And if incumbent LECs and their parent corporations are enabled via *Missoula*’s “revenue-neutrality” requirement to maintain – and, in fact, significantly *increase* – their already excessive rate and earnings levels, they will have the ability to maintain and enlarge their already formidable economic war chest so as to cross-subsidize entry into new markets and new technologies, further distorting economic choices as between incumbent and competitor services. Clarke and Makarewicz have given no account whatsoever for this potentially enormous source of economic loss.

1. The author is President, Economics and Technology, Inc. (“ETI”). This report was prepared at the request of Alltel Communications, Inc., Cavalier Telephone, McLeodUSA, National Cable & Telecommunications Association, NuVox, Inc., Pac-West Telecomm, Inc., RCN Telecom Services, Inc., and XO Communications, LLC. The views expressed herein are, however, solely those of the author, who gratefully acknowledges the assistance of Colin B. Weir of ETI in the preparation of this report.

I. Overview

The *Missoula Plan* for resolving the various intercarrier compensation and access charge disparities² calls generally for reductions in local exchange carrier (“LEC”) switched access charges and certain other usage-based fees, with incumbent LECs (“ILECs”) being afforded the opportunity to offset all of these rate decreases, dollar-for-dollar, on an entirely *revenue-neutral* basis.³ The offsetting ILEC rate increases would include various fixed monthly charges, such as increases in the federal Subscriber Line Charge (“SLC”) and carrier universal service fund (USF) contributions,⁴ as well as a new “Restructure Mechanism” (“RM”). In addition, and while state-level compliance with the provisions of *Missoula* is mandatory only as to *terminating* switched access charges, any reductions in *intrastate* switched access charges would also be offset through *interstate* SLC rate increases and other rate increases that would operate to satisfy the Restructure Mechanism target. In aggregate and after the transition steps have been completed, the *Missoula Plan* contemplates total annual switched access charge reductions of \$6-billion, to be offset through \$4.7-billion in annual SLC increases and the remaining \$1.3-billion to be raised via the Restructure Mechanism.⁵ *Missoula Plan* proponents explain that total Restructure Mechanism costs will be \$1.5-billion and identifies an additional \$725-million in USF increases which, together with the \$4.7-billion in SLC increases, brings total end-state *Missoula* end user rate increases to approximately \$6.9-billion, almost \$1-billion more than *Missoula* reduces access charges.⁶

The *Missoula Plan* has numerous and serious shortcomings, not the least of which is its disparate treatment of incumbent and competitive carriers and massive jurisdictional shifts of revenues from intrastate to interstate without a corresponding transfer of costs. The purpose of this paper is not, however, to detail the numerous infirmities of the *Missoula Plan*, but to focus upon claims being advanced by its proponents as to its potential economic benefits for the US economy generally. These purported economic benefits are outlined in a paper by Richard Clarke and Thomas Makarewicz, both of AT&T, that was presented by *Missoula* proponents concurrently with the Plan’s filing in their July 24, 2006 *ex parte* submission to the FCC. Clarke and Makarewicz (“CM”) have attempted to demonstrate that adoption of *Missoula* would produce sizable gains in aggregate economic welfare, concluding that “the economy-wide

2. *The Missoula Plan for Intercarrier Compensation Reform* dated July 18, 2006 (“Missoula Plan” or “Missoula”), filed as an *ex parte* submission on July 24, 2006.

3. “The Plan gives incumbent local carriers an opportunity to recover lost intercarrier compensation revenues through supplemental sources of recovery. These sources include increased subscriber line charges (“SLCs”) as well as a new Restructure Mechanism, which is designed specifically to *replace switched carrier-to-carrier revenues lost by carriers participating in the Plan* and not otherwise compensated for that loss through end-user charges.” *Missoula Plan Executive Summary*, July 18, 2006, at 1, emphasis supplied. Importantly, the Plan affords no corresponding “make whole” mechanism for CLECs.

4. USF assessments are imposed upon *carriers* that may then recover them through carrier-defined surcharges applied to customer bills.

5. *Missoula Plan*, at 100.

6. *Id.*, Executive Summary, at 13. Although the \$1.5-billion RM funding estimate includes approximately \$200-million for CLECs, the Plan does not include provisions for CLECs to draw from the RM.

benefits of these various reforms may reach \$54 billion during the eight year period after plan initiation.”⁷ As I shall demonstrate through the analysis described below, their forecast suffers from a number of flawed assumptions, is inconsistent with the *Plan* itself, and grossly mischaracterizes the impact on the overall national economy.

This paper is organized as follows. Section II examines the “revenue neutrality” aspect of the *Missoula Plan*, and explores the apparent inconsistency between claims of “savings” to be realized by most residential customers and rate realignments that are supposedly revenue-neutral. In fact, and as confirmed by data provided in the Clarke/Makarewicz paper, rather than being revenue-neutral, *Missoula* will result in multibillion dollar windfall gains for the wireline ILECs.

Section III presents a detailed examination of the specific assumptions underlying the CM “economic benefits” claim, and shows them to be both unsupported and, more importantly, fundamentally invalid. In fact, when these flawed assumptions are corrected, the CM model reveals that adoption of the *Missoula Plan* will actually produce substantial *losses* to the economy overall. Finally, Section IV addresses CM’s incorrect application of a “multiplier” to the claimed economic benefits and several other apparent inconsistencies between the details of the *Missoula Plan* and the specific data inputs to the CM model.

II. Revenue Neutrality

The central, overarching principle underlying *Missoula* is its *revenue neutrality* feature. Irrespective of their existing level of earnings, individual incumbent local exchange carriers (ILECs) are to be *made whole* with respect to any reductions in access and other usage-based fees. ILEC rate levels (viewed across their entire mix of services) that are excessive prior to *Missoula* will remain at least as excessive following its adoption and implementation. At the end of the day and holding demand for each category of service constant, the various rearrangements and restructuring of intercarrier compensation are proffered as resulting in *no net change* in aggregate payments for telecommunications services overall, although *individual customers* and customer groups may experience either decreases or increases in their respective monthly bills. If the Plan is truly revenue-neutral in its operation, it follows that whatever net economic benefit the Plan creates must arise only as a result of the potentially more efficient rate structure that the Plan contemplates – i.e., when excessive usage-based switched access charges are brought closer to cost, thereby stimulating more efficient *downstream* consumption and production decisions with respect to usage-based services. But those efficiencies will be realized if and only if the various reductions in usage-based charges are directly, fully and immediately *flowed through* dollar-for-dollar to residential and business *customers* of the various retail telecommunications services that depend upon ILEC switched access. *Missoula* nowhere *requires* such flow-through, and if it does not occur there is little basis to expect that any significant downstream consumption efficiency gains will arise.

7. Richard N. Clarke and Thomas J. Makarewicz, “Economic Benefits from Missoula Plan – Reform of Intercarrier Compensation,” AT&T Inc. (Exhibit 2 to *The Missoula Plan for Intercarrier Compensation Reform* dated July 18, 2006 (“Missoula Plan” or “Missoula”), at 1.

Excluding the so-called “multiplier effect” (which I address in Section IV below), CM project “cumulative plan benefits” over the initial eight years of the Plan totaling \$41.48-billion.⁸ Elsewhere, CM describe that same \$41.48-billion as “increased consumer surplus.”⁹ A relatively small portion of that figure – only about 19% – represents the gain in consumer surplus arising from the authors’ projection of the demand stimulation resulting from the reduced access prices which, as I explain in Section III below, is grossly exaggerated and unrealistic.

The disconnect here is that the *Missoula Plan* is supposed to be revenue-neutral, which means that the access charge decreases are to be offset, dollar-for-dollar, by rate *increases* elsewhere. But even excluding the effects of assumed demand stimulation, the CM model projects some \$15-billion in net reductions in wireline ILEC revenue (over the first eight years of the plan) resulting from decreases in access charges offset by increases in SLCs, USF surcharges, and any additional (albeit unspecified) payments associated with the Restructure Mechanism (see Table 3 below). So how can a purportedly revenue-neutral rate rebalancing mechanism result in some \$15-billion in net *rate reductions* for consumers? Either some portion of the offsetting rate increases have been understated or omitted in the CM analysis or access reductions have been overstated, or customers who will be experiencing a net rate increase have been excluded from the model. According to the proponents of *Missoula*, most *residential customers* will experience a net reduction in their monthly wireline and wireless bills.¹⁰ However, in order for the Plan to achieve the required *revenue-neutrality*, other customers and customer groups not specifically identified in the *Missoula* documentation will necessarily be forced to pay more. Although we do not know precisely who these customers are, they appear to have been essentially overlooked by the CM model.

The magnitude of access charge reductions as called for in the *Missoula Plan* appears to have been grossly overstated and exaggerated in the CM analysis.

Appendix D to the *Missoula Plan* description reports on the results of a modeling effort attributed to AT&T. There is no indication that this “AT&T Model” was also developed by Clarke and Makarewicz or that they had any involvement in its construction. Indeed, that appears highly unlikely, since the results of the “AT&T Model” are dramatically different from those being reported by CM:

For all incumbent LECs in aggregate, total annual switched access revenues are estimated to be about \$8.9 billion. In the pricing scenario presented here, these revenues decline by nearly \$6 billion under the Plan. This reduction is offset by \$4.7 billion from increased Subscriber Line Charges and \$1.3 billion in funding from the new Restructure Mechanism. Estimated funding from the Restructure Mechanism includes \$320 million for Track 1 carriers, \$548 million for Track 2 carriers, and \$458 million for Track 3 carriers, with an additional \$125 million estimated

8. *Id.*, at 9.

9. *Id.*, at 10.

10. See Exhibit 1 to the *Missoula Plan*. The Exhibit provides before and after monthly bills for fourteen (14) *residential* service arrangements, including wireline, wireless, DSL and VoIP. Net decreases are projected for eleven (11) out of these fourteen configurations, with monthly savings ranging as high as \$14 (for the wireline urban high-use customer). Three categories would confront small monthly increases of between \$0.10 and \$2.05.

for CLECs. These calculations are all based on the use of base period (generally 2004) demand volumes.

Although the \$1.5-billion RM funding estimate includes approximately \$200-million for CLECs, the *Plan* does not include provisions for CLECs to draw from the RM. The CM model also incorporates the effects of assumed demand stimulation (whereas the “AT&T Model” is based upon base period (2004) demand volumes), but even when the effects of demand stimulation are removed from the CM model, its projections of aggregate access charge reductions are *roughly double* those being posited by the *Missoula Plan* itself. More importantly, CM’s results are not even close to being revenue-neutral. Table 1 summarizes the CM results maintaining base period demand throughout the entirety of the eight year period:

Table 1						
Comparison of Clarke-Makarewicz and “AT&T” Models Annual changes from Step 4 onward (assuming no demand stimulation)						
	Clarke-Makarewicz			“AT&T Model”		
	Access charges	SLC/USF	Net change	Access charges	SLC/USF	Net change
Wireline	– \$8.4-billion	+ \$6.1-billion	– \$2.3-billion	– \$6-billion	+ \$4.7-billion SLC + \$1.3-billion USF*	\$0
Wireless	– \$4.1-billion	+ \$0.8-billion	– \$3.4-billion			
Total	– \$12.5-billion	+ \$6.9-billion	– \$5.6-billion	– \$6-billion	+ \$6-billion	\$0
* This figure does not include RM funds for CLECs or additional USF funds contemplated by the <i>Plan</i> .						

CM project incremental annual access charge reductions for wireline toll service of \$2.1-billion at base period demand, accumulating to an aggregate \$8.4-billion decrease (relative to pre-*Missoula* levels) at Step 4 and thereafter. They project annual incremental SLC and USF increases at \$1.53-billion, reaching \$6.11-billion at Step 4 above pre-*Missoula* rates. On the wireless side, CM project a cumulative access charge reduction relative to pre-*Missoula* levels of approximately \$0.00175 when spread across all wireless minutes (only some of which are subject to access charges). For purposes of this analysis, I have maintained per-line *usage* levels at the base year volumes given by CM (791 minutes per month), but have used CM’s projection of total wireless phones as of Step 4 at 249.5-million, since the growth in demand for wireless phones is unrelated to any reductions in per-minute usage charges. CM project monthly per-line USF increases at 26.15 cents per month through Step 4, which aggregates to \$783-million in annual additional USF collections from wireless customers from Step 4 onward.

According to CM and ignoring any theoretical demand stimulation, ILECs will be receiving some \$12.5-billion *less* in switched access charge revenues following the full 4-step transition than they did prior to the onset of the *Missoula Plan*. This result is particularly remarkable inasmuch as *total ILEC switched access revenue* is estimated to be only \$8.9-billion in the “AT&T Model.” The CM estimate of wireless access charge reductions also appears excessive. According to CM, the average reduction in wireless

access charges for those originating wireless minutes that are subject to access charges is \$0.00926.¹¹ CM estimate that 60% of wireless minutes are originating, and that 30% of those minutes are subject to access charges. Spreading the \$0.00926 access charge across all wireless minutes (also adjusting for a small change in wireless reciprocal compensation rates), CM compute an average wireless per-minute access charge reduction at \$0.00175.¹² CM do not provide a source for their \$0.00926 figure. However, an Intercarrier Compensation Forum (“ICF”) *ex parte* document puts average wireless switched access charge payments to ILECs at \$0.006 for inter-MTA CMRS-to-ILEC calls, and at \$0.002 for intra-MTA CMRS-to-ILEC calls.¹³ CM also provide no source for their assumption that 30% of originating wireless minutes involve access charges; I seriously doubt that the incidence of wireless calls subject to access charges anywhere near that high.

This gross overestimate of aggregate access charge reductions is clearly at odds with the specific precepts of the *Missoula Plan*. It is hardly surprising that CM’s estimate of a net decrease in total ILEC revenues exceeding \$5-billion annually following the completion of the 4-step transition would drive their conclusion of massive consumer welfare gains. Of course, *Missoula* does not contemplate *any* net reduction in ILEC revenues, undermining and invalidating the CM “welfare gain” forecast at its most fundamental level. However, rather than simply stop at this point, and for purposes of discussion, let us accept CM’s rate effect inputs at face value. Even with their massive exaggeration of *Missoula*-driven access charge reductions, however, CM’s “welfare gain” calculation cannot withstand scrutiny.

Massive windfall revenue gains for the ILECs

Significantly, if CM’s projected wireline toll demand stimulation is accurate, then rather than being revenue-neutral, *Missoula* will produce enormous windfall revenues for the ILECs, revenues that have been excluded from the Plan’s net revenue neutrality calculation. CM assume that the access charge reductions contemplated in the Plan are flowed-through, dollar-for-dollar, as correspondingly lower retail long distance toll rates. Customers presumably respond to these lower prices by purchasing additional long distance minutes. These presumed additional purchases replace a portion of the ILEC’s access charge revenues that had been lost due to the reduced access charges, and also result in substantial additional *retail* revenues for the long distance carrier. For example, the CM model starts out with a base year volume of 582.3-billion wireline long distance minutes each of which is assumed to produce an average of \$0.05 in retail toll revenues.¹⁴ In Step 1 of the *Missoula Plan*, wireline ILEC access charges are reduced by \$0.0036 per minute, which CM assume is flowed through into the retail long distance price, bringing it down to \$0.0464, a 7.2% decrease. As a result of that lower price, retail toll demand increases to 614.6-billion minutes, i.e., an increase of 32.3-billion minutes. At an average retail price of \$0.0464 per minute, that represents about \$1.497-billion in additional *retail* toll revenues. A portion of those additional retail

11. Clarke/Makarewicz, at 7.

12. *Id.*, at 7, footnote 13.

13. *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, *Ex Parte Brief of the Intercarrier Compensation Forum*, filed October 4, 2004.

14. Clarke/Makarewicz, at 2.

revenues (roughly \$578-million) is paid over to the ILECs as additional access charges, with the remaining (\$918-million) being retained as additional gross profit by the retail long distance provider (which is, in today's markets, quite often the ILEC itself). However, under the terms of the *Missoula Plan* itself, *neither of these additional sources of access charge or toll revenue are included as offsets to the reduced access charges in determining the increases in SLC, USF, and RM revenues necessary to maintain revenue-neutrality.*

There is no question but that the additional access charge revenues arising from any demand stimulation should be recognized as offsets to the purportedly revenue-neutral fixed line rate increases. If the demand stimulation occurs as CM predict, the ILECs will receive these additional access revenues as a direct consequence of the *Missoula* access charge reductions.¹⁵ But what about the retail toll revenues arising from the stimulated demand? In the past, when RBOCs were not allowed to provide long distance service and when the IXC that did provide long distance were separate companies, exclusion of the added retail IXC toll revenues would have been appropriate in evaluating the effects of this type of rate rebalancing upon aggregate *ILEC* revenues. But that is decidedly *not* the current environment. Each of the seven original RBOCs have merged, or are about to merge, with a major interexchange carrier. The Section 272(a) separate long distance affiliate requirement has now sunset in all RBOC jurisdictions, enabling the RBOCs to fully integrate their respective ILEC and IXC operations into a single entity. "Stand-Alone Long Distance" ("SALD") providers – those that do not offer integrated local/long distance packages – have all but disappeared. Table 2 demonstrates that if the demand stimulation that CM project actually materializes, according to the CM analysis total stimulated retail long distance revenues (including the access charge component) will sum to about \$37.6-billion over the initial eight years following the initiation of the *Missoula Plan*. \$8.51-billion of this amount represents additional access charge revenue that ILECs will collect (or impute) but that have not been included as a revenue offset in *Missoula*. A substantial portion of the remaining \$29.1-billion of the retail long distance revenue margin will inure to the same ILEC entities that provide access services to the extent that they are also their (ILEC) customers' long distance carrier. If we assume, for example, that over the initial eight years following initiation of the *Missoula Plan* an average of 80% of ILEC customers purchase their long distance service from their ILEC,¹⁶ then roughly 80% of that additional \$29.1-billion in retail toll revenue (over and above access charge payments) – i.e., about \$23.3-billion – will also inure to the ILECs. Like the stimulated access revenues, these revenues are

15. During the initial access charge rebalancing that occurred between 1984 and 1989, SLC increases were offset by reductions in the Carrier Common Line Charge ("CCLC"), and the then dominant long distance carrier, AT&T Corp., was required to flow-through CCLC reductions in retail toll rates. In calculating the dollar amount of the offset that was required to preserve revenue neutrality, the FCC adjusted for the demand stimulation that was anticipated to result from the lower retail toll prices. See, *MTS and WATS Market Structure; Amendment of Part 67 of the Commission's Rules and Establishment of a Joint Board*, CC Docket No. 78-72; CC Docket No. 80-286, *Memorandum Opinion and Order*, 1985 FCC LEXIS 3824, Rel. February 26, 1985, at para. 4. No corresponding demand adjustment has been incorporated into the fixed line rate increases to be imposed under *Missoula* to offset the access charge reductions.

16. The FCC Industry Analysis and Technology Division's most recent report on *Local Telephone Competition: Status as of December 31, 2005* (issued July 2006) at Table 6 puts total ILEC share of presubscribed residential lines at 58%, for business lines at 38%, or 51% overall. These figures do not include the post-merger reclassifications of MCI presubscribed lines in Verizon territory, or of presubscribed AT&T lines in BellSouth territory, as ILEC presubscribed lines. Further erosion of stand-alone long distance customers and CLEC residential shares will continue to push ILEC LD PIC shares upward. Viewed over the full eight years following *Missoula* initiation, 80% ILEC LD share is a reasonable estimate.

not included as revenue offsets when determining the additional SLC, USF and RM revenues necessary to achieve revenue neutrality under *Missoula*.

Table 2			
Aggregate Eight-year Impact of the Missoula Plan upon ILEC and ILEC Affiliate Revenues Based Upon Clarke/Makarewicz Demand Stimulation and Flow-Through Projections			
Revenue source		Increase (decrease)	Notes
1	Access charge reductions	(\$63.7-billion)	Includes effects of purported demand stimulation
2	Scheduled SLC, USF, RM increases	\$39.6-billion	
3	Subtotal	(\$24.2-billion)	L1 + L2
4	Additional wireline LD revenues net of access charges from stimulated toll minutes	\$29.1-billion	
5	Additional ILEC LD affiliate revenues net of access charges from stimulated toll minutes	\$23.3-billion	L4 x 80%. Assumes 80% of ILEC customers select ILEC as their long distance carrier
6	Additional ILEC revenues from stimulated wireline access minutes	\$8.5-billion	
7	Aggregate net ILEC parent company revenue gain	\$7.6-billion	L3 + L5 + L6. Offsets 19.4% of SLC/USF/RM increases

But will the additional demand and other economic gains being forecast by CM materialize as they expect? That seems highly unlikely. As detailed in Section III below, a correct analysis of the aggregate economic effects of *Missoula* is far more complex than the overly simplistic CM model. Even its projection of increased *consumer* surplus is grossly exaggerated and, in fact, may actually be negative. At the very least, the CM analysis needs to be recast to eliminate the numerous and demonstrably false assumptions that underlie it. And when these defects are corrected, rather than a net economic gain of \$41-billion, \$54-billion, or any other amount, it will become clear that if *Missoula* is allowed to go forward, substantial economic *losses* will surely result.

The economic benefit being projected by the CM model is critically dependent upon its assumption of dollar-for-dollar flow-through of the lower access charges in retail usage prices.

As drafted, *Missoula* would reduce certain *intercarrier payments* while *increasing* certain fixed monthly charges that are imposed *by ILECs* (and other carriers) upon their own retail end-user customers. Because the escalations in line rates – SLCs, USF charges, and charges to be levied under the new “Restructure Mechanism” (“RM”) – would all be collected by the ILECs and RLECs directly from their end-user retail customers, flow-through of these rate *increases* into retail end-user rates will surely take place. But flow-through of the *reductions in access charges* in retail usage prices is extremely unlikely to

occur, and absent such flow-throughs, consumers will be paying higher monthly line rates without seeing any of the offsetting decreases in usage-based charges.

The principal sources of competition for ILEC wireline long distance services comes from CLECs that offer local and long distance service bundles, from wireless carriers and, to a considerably lesser extent, from “over-the-top” Voice over Internet Protocol (“VoIP”). For CLECs and cable telephony providers, *Missoula*’s mandated reductions in switched access charges will have virtually no *net effect*: CLEC access charge payments to other carriers to terminate long distance calls placed by their subscribers will decrease, but so too will the access charge *revenues* realized by those same CLECs from other carriers for terminating inbound long distance calls *to their subscribers*. Since originating and terminating long distance minutes are roughly equal, the reduced costs and reduced revenues will net to zero, giving CLECs nothing to flow-through. Wireless carriers already pay far lower access charges than are implicit in wireline long distance prices, and “over-the-top” VoIP providers may pay no access charges at all.¹⁷ Reductions in access charges will thus have little or no effect upon wireless and VoIP retail price levels. For example, according to the CM model, the maximum decrease in wireless carrier access charges after the full four-year implementation of the *Missoula* Plan amounts to \$0.0015 per minute – i.e., 15 one-hundredths of one cent. By contrast, CM estimate full *Missoula* per-minute *wireline* access charge reductions at \$0.0144 – i.e., 1.44 cents per minute. Thus, even if wireless carriers were to flow-through their entire \$0.0015 per-minute savings in lower retail prices (which, as I show below, is extremely unlikely) and further assuming that this \$0.0015 wireless retail price drop forced *wireline* carriers to implement a corresponding price change, that would still allow wireline carriers to retain as additional profit some 90% of the decrease in wireline carrier access costs. Accordingly, it is unrealistic to expect any reductions in retail wireline prices.

Because *Missoula* does not require that carriers flow-through any of the access charge reductions in retail prices charged to end-user customers, such flow-throughs would occur if and only if compelled by competitive marketplace forces. But the elimination of the ILECs’ two largest long distance rivals – pre-merger AT&T and MCI – make this extremely unlikely. Because competing carriers would realize little or no net cost savings under *Missoula*, there would be insufficient competitive pressure to discipline ILEC pricing of long distance and other services that rely upon switched access and other intercarrier connections. Post-merger AT&T and Verizon currently control more than 58% of the consumer long distance market within each of their respective ILEC footprints.¹⁸ Following AT&T’s merger with BellSouth, the company will dominate local and long distance services in 22 states covering more than half of the entire US population. There is no longer any “stand-alone long distance” competition, so there is little to force AT&T or Verizon to reduce their consumer long distance rates.

17. Wireless carriers pay no access charges at the wireless end of a wireless-wireline call, and pay no access charges at all on calls placed between and among their own wireless customers. Wireless carriers also pay no access charges for calls terminating within the same “Major Trading Area” (“MTA”), expansive geographic regions that may include large portions of a state, of several states, or entire states. “Over-the-top” VoIP service providers are not subject to access charges at the broadband end of a VoIP call, since the connection between the customer and the service provider is accomplished via the Internet. The status of access charge treatment of VoIP calls at the “open” (PSTN) end remains ambiguous at this time.

18. *Id.*

Direct flow-through of reductions in costs to the affected services has been shown to be unlikely even where ILEC market shares are relatively low. ILECs currently control only about 39% of the market for consumer high-speed Internet access – the latest FCC data put the number of ILEC ADSL customers at 19.5-million, as compared with 25.6-million using cable modem services.¹⁹ Yet recent events demonstrate that it is unlikely that ILECs will translate cost reductions affecting a particular service into lower retail prices for that service *even where substantial competition is present*. For example, the FCC recently eliminated the requirement that ILECs collect Universal Service Fund surcharges from DSL customers, a change that took effect on August, 2006. Depending upon the type of DSL service involved, these monthly USF fees had ranged between \$1 and \$3 for typical consumer ADSL service. When the mandatory USF surcharges were eliminated, Verizon and BellSouth immediately replaced the USF fees with new and “made up” surcharges (Verizon referred to them as the “DSL Supplier Surcharge,” BellSouth called it the “Broadband Fee”) at virtually identical amounts. Not only did Verizon and BellSouth fail to pass along the USF surcharge elimination to their DSL customers, they actually took affirmative steps to *increase their own prices* so as to essentially *replace* them, thus maintaining the “bottom line of the customer’s bill” essentially unchanged. Clearly, neither Verizon nor BellSouth felt compelled by cable modem competition to pass along the USF surcharge elimination, choosing instead to maintain the preexisting price point, which their customers had apparently been willing to pay. It was only after receiving a great deal of adverse publicity about this tactic – together with *political* pressure from the FCC – that both Verizon and BellSouth backed down.²⁰ If flow-through did not occur where the ILECs hold only a minority share of the market, flow-through of access charge reductions in the retail long distance market – a market that ILECs dominate – seems rather far-fetched.

Without any requirement (competitive or otherwise) to flow-through access cost reductions, the ILECs – and the RBOCs in particular – stand to realize massive financial gains. To understand why, it is important to keep in mind that *Missoula’s* revenue-neutrality requirement applies solely to the RBOCs’ *ILEC entities* and not to the entire corporation. For example, AT&T’s long distance entity “purchases” access services at tariffed rates from the AT&T ILECs (e.g., the former SBC operating companies). It also purchases access services from nonaffiliated ILECs, such as those owned by Verizon, Qwest and the various non-Bell ILECs. While the mechanics of these relationships may differ, at least at a superficial level, their economic effect is exactly the same:

- With respect to the “purchases” made by an RBOC’s long distance entity from the same RBOC’s ILECs, the effect of access charge reductions but without any retail price flow-through is to shift revenues from the ILECs to the long distance affiliate. Under *Missoula*, however, the *ILEC entities’* revenue loss is made up, dollar-for-dollar, through increased SLCs and other nonusage charges, so there is no net loss of profit to the ILECs. However, the long distance affiliate’s profit will increase by the precise amount of the reduction in access charge payments it makes to its ILEC affiliates.

19. Industry Analysis and Technology Division, Federal Communications Commission, *High-Speed Services for Internet Access: Status as of December 31, 2005*, released July 2006, at Table 1. As of December 31, 2005, there were 19,514,318 ADSL subscribers and 25,583,233 Cable Modem subscribers. Overall, there were a total of 50,237,139 high speed lines in service (200kbps in at least one direction), putting the (primarily ILEC-provided) ADSL share at only 38.8%.

20. See, Verizon News Release, “Verizon Removes DSL Supplier Surcharge,” August 30, 2006; BellSouth News Release, “BellSouth Statement on Cost Recovery,” August 25, 2006.

- With respect to purchases of access service by, for example, Verizon's long distance affiliate from AT&T ILECs, Verizon's access payments will decrease, and without flow-through those savings will be retained as additional profits. Concurrently, AT&T's long distance affiliate will be paying less for access to the Verizon ILECs, capturing those savings as additional profits for AT&T. Both the AT&T and the Verizon ILECs will, of course, be receiving correspondingly less access revenue but, per *Missoula's* revenue-neutrality feature, will be made whole through increases in SLCs and other fees. Viewed from the perspective of the *parent corporation* rather than from that of the individual ILEC entities, *Missoula* will truly allow them to "have their cake and eat it too." The ILEC entities will be made whole for the loss of access revenues, while the long distance affiliates will convert the access savings on their books into additional, and windfall, profit.

Table 3 demonstrates the financial gain that the RBOCs will realize at the parent company level by virtue of the fact that the *Missoula* revenue-neutrality requirement is confined solely and entirely to the *ILEC* entities. The analysis assumes no flow-through of access savings (and hence no demand stimulation), and further assumes that 80% of ILEC retail customers select the ILEC's long distance affiliate as their presubscribed long distance carrier. As the Table shows, if *Missoula* is adopted and implemented as proposed, the ILEC parent companies stand to realize in the range of \$28.7-billion in net financial gain over the initial eight years of the Plan.

Table 3			
Aggregate Eight-year Impact of the Missoula Plan upon ILEC and ILEC Affiliate Revenues Based Upon CM Model with No Stimulation and No Flow-through			
Revenue source		Increase (decrease)	Notes
1	ILEC Access charge reductions	(\$54.6-billion)	See Note 1 below
2	ILEC Revenues recovered via scheduled SLC, USF, and RM increases	\$39.6-billion	
3	Net change in ILEC entity revenue	(\$15.0-billion)	L1 + L2
4	Additional revenues that inure to wireline LD carriers due to decreased access costs and no flow through	\$54.6-billion	
5	Additional revenues that inure to ILEC LD affiliate due to decreased access costs and no flow through	\$43.7-billion	L4 x 80%. Assumes 80% of ILEC customers select ILEC as their long distance carrier
6	Aggregate net ILEC parent company revenue gain	\$28.7-billion	L3 + L5. Offsets 72% of SLC/USF/RM increases
Note 1: CM's projection of \$54.6-billion in aggregate access charge reductions is inconsistent with the projection developed by the Missoula Group as reflected in the "AT&T Model" in Appendix D. There, end-state annual access charge decreases are shown as \$6-billion, implying aggregate 8-year reductions (reflecting initial phase-in) of only \$39-billion. If that figure were substituted for CM's \$54.6-billion, the aggregate net ILEC parent company revenue gain would be approximately \$31-billion.			

III. The Clarke/Makarewicz Consumer Benefits Analysis

The CM analysis is driven by a series of unsupported and unrealistic assumptions, all of which serve to inflate and exaggerate the likely benefits of the Plan. CM also misapply economywide multiplier effects, again serving to overstate the purported benefits of the Plan. The only means by which the various reductions in switched access and other intercarrier compensation rate components would result in a *bona fide* and substantial economywide benefit is through the elimination of *revenue neutrality* and the various corporate welfare payments and protections that the incumbent carriers have hard-wired into *Missoula*. Significantly, Clarke and Makarewicz do not explore the substantial potential benefits to consumers that would arise if the *Missoula Plan* did not require intercarrier compensation reform to be revenue neutral.

The Clarke/Makarewicz economic benefits model is critically dependent upon several key, yet entirely flawed, assumptions as to the specific effects of the Missoula Plan

The flawed assumptions underlying the CM analysis

The CM model is driven by a series of critical assumptions regarding the likely responses of service providers to *Missoula's* lower access prices and the likely responses of consumers to such changes, if any, in *retail* end-user prices that may ensue. Each and every one of these assumptions is unsupported by the authors and all are, to put it simply, incorrect. The model assumes:

- (1) That 100% of access charge reductions will flow through to consumers in the form of lower retail prices available to end-user consumers;
- (2) That 100% of the intrastate access charge reductions prescribed by the Plan are adopted by state commissions and are fully flowed through in end-user retail prices;
- (3) That the price elasticity of demand for long distance toll service is -0.72;
- (4) That the price elasticity of demand for wireless service is -1.29;
- (5) That cross-price elasticities among alternate telecom technologies are zero and can be ignored; and
- (6) That all wireline and wireless long distance minutes are priced and sold on a per-minute-of-use basis.

These assumptions are highly interrelated: Even if less than all of them are wrong (and *all* of them *are* wrong), the CM model would fail to accurately capture and calculate the economic effects of the Plan. Customers will respond to lower *retail* usage charges, not lower *wholesale* usage charges. Retail usage charges will be reduced only if retail service providers (ILECs and non-ILECs) realize net access rate reductions under *Missoula* and flow through the entirety of such net reductions in the prices they charge their retail end-user customers. Significantly, *Missoula* does not require any such flow-throughs, and retail prices of long distance services provided by the same ILECs and their long distance affiliates that will be allowed to increase fixed line rates and obtain additional revenues via the Restructure Mechanism are largely if not entirely unregulated at both the state and federal levels. So unless carriers realize net reductions and present their retail customers with correspondingly lower retail long distance prices – which they

are compelled neither by regulation nor by competitive marketplace forces to do – consumers will not increase their consumption, irrespective of the applicable price elasticity of demand. However, the CM model and – for that matter – the various impact “illustrations” provided in Exhibit 1 to the *Missoula Plan* document, all assume full and immediate flow-through of all decreases in access charges and other usage-based intercarrier fees. To the extent that less than all – or none – of the access rate reductions result in lower retail prices, the potential demand stimulation and increases in consumer surplus being assumed in the CM model will be attenuated or (if there is no flow-through at all) eliminated altogether.

A key requirement of CM’s demand stimulation analysis is that *all wireline and wireless long distance services* be priced on a per-minute-of-use basis, and that it is these per-minute usage charges that will be reduced to correspond with the decrease in switched access rates. If the per-minute access rate is reduced, and if the retail service provider correspondingly reduces its own retail prices by a like amount, the lower per-minute price would create a corresponding increase in consumer surplus and stimulate additional consumption of these services. But what if – as is in fact the case – the retail pricing of such services is on a basis other than per-minute-of-use? Today, a large portion of *wireline* long distance and almost all *wireless* pricing involves either flat-rate (unlimited) or block-of-time calling. Under block-of-time pricing, the customer receives a fixed “monthly calling allowance,” usually denominated in minutes-of-use, and (particularly in the case of wireless) is subject to often large “overage” or “overtime” charges if the monthly allowance is exceeded. In order to avoid such penalties, customers often “guess high” when selecting among alternative block-of-time levels. Many wireless pricing plans also include “free” night and weekend calling, usually to anywhere within the US. Once having subscribed for an unlimited or block-of-time calling plan, consumers perceive any incremental minutes as “free.” With respect to such plans, to the extent that any flow-through of lower access charges occurs at all, it would most likely take the form of an increase in the monthly calling allowance at prevailing price points rather than as a decrease in monthly charges. Even if flow-through occurs, its effects upon consumer surplus and consumption would be minimal at best.

CM also assume that the basic rate restructuring contemplated in the Plan is implemented both in the *interstate* jurisdiction and in *all 50 states* – in fact, fully 72% of the projected wireline access charge reductions arise at the intrastate level. But *Missoula* makes state PUC adoption of these restructurings voluntary in some respects,²¹ although carriers may, beginning at Step 2, “petition the FCC to preempt State authority over Track 1 and 2 carriers’ intrastate originating access rates in order to fully implement all of the Plan’s terms for those carriers.”²² All else equal, any delay in or failure of state-level implementation, even in some states, will reduce the aggregate number of access minutes whose rates are being reduced and which will be affected, if at all, by demand responses to the (potentially) lower retail prices.

21. *Missoula* does not mandate reductions in *intrastate* originating switched access charges for any of the three tracks. Adoption of track 3 terminating intrastate access rates is also voluntary. Under *Missoula*, reductions in *intrastate* access charges are compensated by increases in *interstate* SLC, USF and RM rates, in effect, shifting revenues – but not costs – out of the intrastate and into the interstate jurisdiction. It is, to say the least, less than obvious that state regulators would perceive such an outcome to comport with their state’s interests.

22. *Missoula Plan*, at 3.

CM make certain assumptions with respect to the price-elasticity of demand for long distance services as a basis for the projections of potential demand responses. They assume an *own-price elasticity* of -0.72 for wireline long distance calling, and -1.29 for wireless calling. Even assuming full flow-through, full state-level adoption of *Missoula*, and 100% per-minute-of-use pricing, if one or both of these price elasticities are overstated (and as I explain below, both are), the resulting demand stimulation will necessarily be far lower than CM predict. In addition, by focusing solely upon *own-price* effects and ignoring *cross-price elasticities*, the CM model likely overstates net demand stimulation taken across all alternate telecom technologies.

Flawed Assumption 1: 100% flow-through

As previously discussed, CM's assumption of 100% flow-through of access charge savings into lower retail prices is unrealistic in the extreme. Yet the "economic benefits" they seek to ascribe to *Missoula* are critically dependent upon such flow-through actually taking place. Table 4 examines the overall sensitivity of the CM results to the flow-through assumption. Holding all else equal, flow-throughs of 100% through 0%, in 10% increments, of the usage rate decreases contemplated in the *Missoula Plan* are calculated. As the Table demonstrates, at any flow-through level below 54% (and accepting all other CM assumptions), the "economic benefits" of *Missoula* turn decidedly *negative*.

Table 4			
Economic gain (loss) of the Missoula Plan Sensitivity to CM Assumption 1: Flow-through			
% of Access charge reductions flowed through to consumers	Effect on wireline consumers	Effect on Wireless consumers	Overall Effect of Missoula Plan
100%	\$21.1-billion	\$19.4-billion	\$41.5-billion
90%	\$14.4-billion	\$16.9-billion	\$32.3-billion
80%	\$7.9-billion	\$14.5-billion	\$23.3-billion
70%	\$1.5-billion	\$12.1-billion	\$14.5-billion
60%	(\$4.8-billion)	\$9.7-billion	\$5.9-billion
50%	(\$10.9-billion)	\$7.3-billion	(\$2.6-billion)
40%	(\$16.9-billion)	\$4.9-billion	(\$11.0-billion)
30%	(\$22.7-billion)	\$2.6-billion	(\$19.2-billion)
20%	(\$28.5-billion)	\$0.2-billion	(\$27.2-billion)
10%	(\$34.1-billion)	(\$2.1-billion)	(\$35.2-billion)
0%	(\$39.6-billion)	(\$4.4-billion)	(\$43.0-billion)

Flawed Assumption 2: 100% of intrastate access charges prescribed by the Plan are adopted by state commissions and flowed-through in correspondingly lower retail prices

The *Missoula Plan* includes many components, only some of which are mandatory. In particular, any reductions in or elimination of *intrastate* originating access charges contemplated by the Plan are only *suggestions*, the implementation of which would require state-by-state regulatory action. In their analysis of the economic effects of Plan, Clarke and Makarewicz assume that all of the intrastate access charge reductions are adopted concurrently with the *interstate* rate changes that are called for by the Plan. While the *Missoula Plan* does provide certain incentives to encourage states to adopt the entire *Plan*, there can be no assurance that full state-level adoption will occur under the same transition schedule as is anticipated for interstate services. If some states fail to adopt the *Plan*, or are unable to complete the necessary proceedings to implement that *Plan* in time to provide all of the potential consumer benefits outlined by Clarke and Makarewicz, their projections of economic gains are overstated. Table 5 below examines the sensitivity of the CM projections to the state adoption assumption. Alternative levels of state PUC adoption of *Missoula* rate rebalancing are examined at 10% increments.

Table 5			
Economic gain (loss) of the Missoula Plan Sensitivity to CM Assumption 2: Intrastate Adoption			
% State adoption of voluntary Access charge reductions	Effect on wireline consumers	Effect on Wireless consumers	Overall Effect of Missoula Plan
100%	\$21.1-billion	\$19.4-billion	\$41.5-billion
90%	\$18.7-billion	\$18.7-billion	\$38.3-billion
80%	\$16.3-billion	\$17.9-billion	\$35.2-billion
70%	\$13.9-billion	\$17.2-billion	\$32.1-billion
60%	\$11.6-billion	\$16.5-billion	\$29.1-billion
50%	\$9.2-billion	\$15.8-billion	\$26.0-billion
40%	\$6.9-billion	\$15.1-billion	\$23.0-billion
30%	\$4.6-billion	\$14.4-billion	\$20.0-billion
20%	\$2.3-billion	\$13.7-billion	\$17.0-billion
10%	\$0.0-billion	\$13.0-billion	\$14.0-billion
0%	(\$2.2-billion)	\$12.3-billion	\$11.1-billion

Flawed Assumption 3: The price elasticity of demand for long distance toll service is -0.72

The CM analysis anticipates that the lower long distance rates that will be offered to consumers as carriers flow-through the decreases in access charges and other intercarrier payments in their retail prices will stimulate increased usage of the retail long distance services. The quantification of such demand stimulation is based upon an assumed *own-price elasticity of demand* of -0.72. Clarke and Makarewicz obtain that particular value (-0.72) from ancient sources that are not applicable to current market and pricing conditions. While the specific references they cite have 1999 and 2002 dates, an examination of the

cited writings reveals that their sources for the -0.72 value come from other, much older studies (1994 and 1993, respectively). CM also cite a 1980 monograph by Lester Taylor, which reports the results of toll price elasticity studies conducted between 1970 and 1975. These woefully out-of-date sources describe the price elasticity of demand for toll services applicable during a time when long distance toll prices ranged from approximately \$1.00 per minute to \$0.50 per minute (expressed in nominal dollars), which is a far cry from the *current* 2006 long distance price level of \$0.05 per minute or less (CM assume a price of \$0.05 per minute).²³

Any estimate of the price elasticity of demand for a given product or service is accurate only within a small range of prices, and must be recalculated for any significant change in price level. In particular, and all else equal, the price elasticity for a given product or service tends to *decrease* as the price of that product or service decreases. At a price of \$1.00, a 50% price drop represents a 50 cent decrease. However, at a price point of only \$0.02, a 50% price drop represents only a one cent decrease. Although the *percentage change* in price for each of these two examples is the same, consumers are far more likely to react to a drop of 50 cents than to a drop of a penny. Thus, a price elasticity estimate that may have been valid and accurate at a \$1.00 per-minute price cannot be inferred as being accurate or applicable at the 2 cent price point. In fact, expert testimony offered recently by RBOCs have expressly challenged the use of the -0.72 value in favor of a far lower number, in the range of -0.2 to -0.1, when addressing the matter of toll stimulation in several recent state proceedings.²⁴

The CM model associates most of the economic gain from *Missoula* rate restructuring with the increase in consumer surplus resulting from the assumed lower retail prices, with the remainder being attributed to assumed stimulation of additional consumption of the (then) lower-priced retail services. However, the level of demand stimulation being projected by CM is driven by their use of antiquated and excessive own-price elasticity estimates. Substituting more realistic price elasticities appropriate for current long distance price levels will reduce the overall CM projection, as shown in Table 6 below. As with the sensitivity analyses for the other assumptions, all else is being held constant here – i.e., we are assuming 100% flow-through and 100% state-level adoption of the *Missoula* price changes and, of course, we are assuming that all long distance calling is priced to the end-user on a per-minute-of-use basis.

23. Clarke/Makarewicz, at 2.

24. Application Of Qwest Corporation for an Increase in Revenues, Oregon Public Utilities Commission Docket No. UT-125, Rebuttal Testimony of Aniruddha Banerjee on behalf of Qwest Corporation, May 3, 2001.

Table 6			
Economic gain (loss) of the Missoula Plan Sensitivity to CM Assumption 3: Toll Price-Elasticity			
Assumed Toll Price Elasticity	Effect on wireline consumers	Effect on Wireless consumers	Overall Effect of Missoula Plan
-0.72	\$21.1-billion	\$19.4-billion	\$41.5-billion
-0.6	\$20.1-billion	\$19.4-billion	\$40.3-billion
-0.45	\$18.7-billion	\$19.4-billion	\$38.8-billion
-0.3	\$17.5-billion	\$19.4-billion	\$37.4-billion
-0.15	\$16.2-billion	\$19.4-billion	\$36.1-billion
0.00	\$15.0-billion	\$19.4-billion	\$34.7-billion

Flawed Assumption 4: That the correct price elasticity of demand for wireless service is -1.29

Clarke and Makarewicz also rely upon an outdated price elasticity study for wireless service that is based upon demand (and prices) for wireless service prevailing during the 1999-2001 time frame. Between 1999 and 2005, average wireless revenue per minute has plummeted by more than 68%, from \$0.22 to \$0.07.²⁵ This dramatic reduction in the effective per-minute price for wireless service renders any price elasticity of demand developed for a price point of \$0.22 invalid at current “prices.” Moreover, as previously discussed, wireless service is typically sold in block-of-time increments rather than on a strict *per-minute-of-use* basis. For customers that do not generally use their entire block of time, a price reduction (assuming flow-through actually takes place) either in the form of more minutes in the block or a lower monthly price for the block) would not be expected to stimulate additional minutes. And for customers who periodically exceed their monthly usage allowance within the block, wireless carrier pricing practices in the US involve the use of *penalty* type prices (in the range of \$0.30 to \$0.50 per overtime minute), which is so far in excess of any access charge or intercarrier compensation payment that any flow-through, even if it did occur, would be so small in relative terms as to have no discernable impact upon customers’ use of these “overtime” minutes. Finally, as also noted above, wireless calls are subject, on average, to far lower access charges than conventional wireline long distance calls, such that even if the entire *Missoula* access reductions applicable to wireless carriers were flowed through in lower retail usage prices, the amounts involved would be extremely small. Wireless carriers pay no access charges at the wireline end of a call, pay no access charges on calls between wireless phones on their respective wireless networks, and pay no access charges on wireless-to-wireline and wireline-to-wireless calls that originate and terminate within the same Major Trading Area. And as to any actual flow-through that might occur, only those consumers that are right on the margin of their calling plan will consider using more wireless minutes as a result of a price decrease in *average* wireless airtime charges.

Table 7 below demonstrates the effect of substituting more realistic estimates of wireless price elasticities for the -1.29 value used in the CM model. As was the case for wireline services, the CM model

25. 11th Annual FCC CMRS Report, WT Docket No. 06-17, Released September 29, 2006, at 106.

associates most of the economic gain from *Missoula* rate restructuring with the increase in consumer surplus resulting from the assumed lower retail prices, rather than from stimulation of additional consumption of the (then) lower-priced retail services. Substituting more realistic price elasticities will reduce the overall CM projection of economic gain. As with the sensitivity analyses for the other assumptions, all else is held constant here.

Table 7			
Economic gain (loss) of the Missoula Plan Sensitivity to CM Assumption 4: Wireless Price-Elasticity			
Assumed Wireless Price Elasticity	Effect on wireline consumers	Effect on Wireless consumers	Overall Effect of Missoula Plan
-1.29	\$21.1-billion	\$19.4-billion	\$41.5-billion
-1.00	\$21.1-billion	\$19.2-billion	\$41.2-billion
-.75	\$21.1-billion	\$19.0-billion	\$41.0-billion
-.50	\$21.1-billion	\$18.9-billion	\$40.8-billion
-.25	\$21.1-billion	\$18.7-billion	\$40.6-billion
0.00	\$21.1-billion	\$18.6-billion	\$40.4-billion

Flawed Assumption 5: That cross-price elasticities among alternate telecom technologies are zero and can be ignored

In their assessment of demand effects associated with the assumed retail price reductions, CM consider only *own-price elasticities* and ignore cross-elastic effects. In recent years, consumers have shifted substantial amounts of their long distance calling to their wireless phones largely because they perceive such calls as “free.” Unless the customer has elected an unlimited or block-of-time plan for wireline long distance, incremental charges apply for incremental long distance calling. However, as to that customer’s *wireless* phone, for calls placed within the monthly calling allowance, to other wireline phones on the same network, or during night/weekend periods, the incremental charge for these incremental minutes is zero. If wireline access charges are reduced or eliminated (thus more closely approximating the access charge conditions wireless carriers currently face), wireline carriers may well adopt “national” calling models in which the distinction between “local” and “long distance” is collapsed, and all domestic – and perhaps even some international – calls become effectively “local.” Such a fundamental revision in wireline pricing may well stimulate additional usage, but a good deal of that may well represent a re-shifting of what are now wireless minutes back to the considerably higher quality wireline services. As such, the *net stimulation* of wireline/wireless calling may be minimal, with a good portion of *apparent* increased wireline usage resulting from a shift away from wireless rather than an absolute demand increase.

Flawed Assumption 6: That all wireline and wireless long distance minutes are priced and sold on a per-minute-of-use basis

In their calculation of *Missoula Plan* benefits that might arise for users of wireline long distance toll service, Clarke and Makarewicz mistakenly assume that all wireline toll minutes are subject to per-minute

pricing. Recent RBOC statements to investors and financial analysts have made no secret of the fact that a large percentage of consumers now subscribe to “bundles” of local and long distance services that provide either unlimited or so-called “block-of-time” pricing for long distance calling.²⁶ These service bundles do not include per-minute pricing, and would not, given the current pricing structure, allow for lower access charges to flow through to consumers via lower per-minute rates. For example, a customer subscribing to a Verizon unlimited long distance plan priced at \$35 a month would not see the benefit of reduced access charges even if Verizon lowered its stand alone per-minute toll rates; the only benefit that might arise would come from a reduction in the fixed monthly charge, which would of course be offset through increases in the SLC and other fixed rate elements and surcharges.

Table 8 below analyzes the effects of alternate assumptions regarding the extent of per-minute pricing of wireline and wireless services. At per-minute pricing applicable to less than 52% of all wireline and wireless minutes, and holding all other CM assumptions constant, *Missoula* would produce decidedly negative economic benefits. Given the relatively small percentage of wireline minutes – and the even smaller percentage of wireless minutes – that are actually subject to per-minute pricing, the CM assumption that *all minutes are priced on a per-minute basis* is clearly fatal to their overall conclusion.

Table 8			
Economic gain (loss) of the Missoula Plan Sensitivity to CM Assumption 6: Per-Minute Pricing			
% of Minutes Billed on a Per-Minute Basis	Effect on wireline consumers	Effect on Wireless consumers	Overall Effect of Missoula Plan
100%	\$21.1-billion	\$19.4-billion	\$41.5-billion
90%	\$15.1-billion	\$17.0-billion	\$32.9-billion
80%	\$9.0-billion	\$14.6-billion	\$24.4-billion
70%	\$2.9-billion	\$12.2-billion	\$15.8-billion
60%	(\$3.2-billion)	\$9.9-billion	\$7.3-billion
50%	(\$9.2-billion)	\$7.5-billion	(\$1.3-billion)
40%	(\$15.3-billion)	\$5.1-billion	(\$9.8-billion)
30%	(\$21.4-billion)	\$2.7-billion	(\$18.3-billion)
20%	(\$27.5-billion)	\$0.4-billion	(\$26.9-billion)
10%	(\$33.5-billion)	(\$2.0-billion)	(\$35.4-billion)
0%	(\$39.6-billion)	(\$4.4-billion)	(\$44.0-billion)

26. For example, as of the second quarter of 2005, Verizon 60% of customers subscribed to a package or bundle of service. As of second quarter 2006, Verizon had achieved a 22% penetration rate (and a 40% annual growth rate) of its so called “Freedom” bundle which offers consumers unlimited local and long distance calling. See, Verizon Communications, *Second Quarter 2005 Earnings Conference Call*, July 26, 2005, transcript at 6, available at <http://investor.verizon.com/news/20050726/>, and Verizon Communications, *Second Quarter 2006 Earnings Conference Call*, August 1, 2006, transcript at 5, available at <http://investor.verizon.com/news/20060801/>.

Correcting for the assumptions made by Clarke and Makarewicz not only eliminates all of the economic benefits they ascribe to the Missoula Plan, but confirms that adoption of the Plan will actually result in significant economic harm.

Each of the sensitivity analyses presented above was limited to examining the effects of correcting *individual* CM assumptions in isolation from the others, holding all else constant. However, in order to provide a more complete assessment of the true economic effects of *Missoula*, the sensitivity analysis will need to examine the effects of correcting all of the flawed assumptions that drive the CM model. Ideally, of course, the unsupported CM assumptions should be replaced by specific data, but such information is not readily available. Accordingly, I have constructed three alternative sets of assumptions, and based thereon have calculated the resulting economic gain (loss) that adoption of *Missoula* would engender. Table 9 below summarizes each of these scenarios and compares them to the baseline CM assumptions.

- *Scenario 1* presents what I consider to be the most realistic values for each of the parameters. Thus, for example, the assumption of 100% flow-through is replaced by an estimate of 20% flow-through; the assumption of 100% minutes-of-use retail pricing is replaced by 25% for wireline and 5% for wireless.
- *Scenario 2* presents what might be described as a “best case” condition – i.e., one that is closer to the CM assumptions than what I consider to be realistic.
- *Scenario 3* presents a “worst case” condition, assuming, for example, no flow-through at all, no demand response, and lower values for per-minute pricing.

For convenience, the Table includes the values for each parameter than are implicit in the CM model.

Table 9				
Sensitivity Analysis of the Economic Effects of <i>Missoula</i> (excluding multiplier effects)				
Assumption	CM model with CM assumptions	Scenario 1: “Realistic” values	Scenario 2: “Best Case” values	Scenario 3: “Worst Case” values
Flow-through of access charge reductions	100%	10%	20%	0%
State adoption of <i>Missoula</i> restructuring	100%	50%	75%	25%
Price elasticity – wireline	-0.72	-0.15	-0.3	-0.05
Price elasticity – wireless	-1.29	-0.5	-0.75	-0.25
% minutes-of-use pricing – wireline	100%	25%	50%	15%
% minutes-of-use pricing – wireless	100%	5%	10%	0%
Aggregate economic gain(loss)	\$41.5-billion	(\$42.7-billion)	(\$38.4-billion)	(\$44.0-billion)

IV. Other Errors and Inconsistencies in the CM analysis

Substitution of more realistic assumptions for the patently flawed foundations of the CM analysis converts the purported “economic benefits” of the *Missoula Plan* into distinctly negative outcomes. However, there are several other shortcomings of the CM model that contributed to its highly exaggerated “economic benefits” projection.

Effect of the Missoula Plan on nonresidential customers. The CM paper – and the accompanying customer impact analyses presented in Exhibit 1 to the Plan – suggest a net decrease in carrier revenues under *Missoula* and hence a net price reduction for the ultimate consumer. But a “revenue neutral” scenario implies a zero-sum outcome – i.e., if some customers end up paying less, then others would presumably end up paying more. What is missing from both the CM paper and from Exhibit 1 is any identification or discussion relative to customers who would end up paying more. Inasmuch as Exhibit 1 is confined entirely to residential wireline and wireless *consumers* and contains no information whatsoever regarding the impact of the *Missoula Plan* upon business, institutional and government telecommunications customers, it would not be unreasonable to surmise that the economic impact upon these omitted customer segments is decidedly *negative*.

The possibility also exists that the CM model has excluded or misapplied certain other sources of increased rates inherent in the *Missoula Plan* that affect the residential segment. In other words, CM may have failed to consider all of the sources of added revenue that would be available to carriers so as to offset the access charge reductions called for under the Plan. In such an event, CM’s “economic benefits” assessments would of course be exaggerated.

“Multiplier” effects. After first calculating what purports to be the direct economic gains arising from implementation of *Missoula*, CM then adjust their projection by applying a “Regional Multiplier” so as to capture the secondary effects of those same economic gains.²⁷ CM state that “Because Missoula plan compensation reforms will increase net overall expenditures on telecommunications by \$4.97 billion over its phase-in, these increased expenditures may stimulate greater output and employment in the overall economy.”²⁸ No source or explanation for the \$4.97-billion “increase [in] net overall expenditures on telecommunications” is provided; indeed, if the CM demand stimulation projections are accurate, the net increase in telecommunications sector expenditures could well exceed \$20-billion.²⁹

Multiplier effects are associated with positive and negative change in the overall level of economic activity, and are intended to account for secondary effects. For example, if a company enters a community and builds a new factory employing 1,000 workers, a direct impact of that investment is those 1,000 new jobs. However, those 1,000 people will need houses, buy groceries, eat at restaurants, buy and maintain

27. CM cite the Bureau of Economic Analysis, U.S. Department of Commerce RIMS II Multipliers (1997/2002), Table 1.4, for the Telecommunications Sector, which they give as 2.56. Clarke/Makarewicz, at 10; footnote 19.

28. *Id.*

29. This includes the \$7.7-billion net gain for ILEC parent companies, \$5.82-billion in additional revenues to non-ILEC-affiliate toll providers, and \$6.8-billion additional consumer expenditures on wireless service. See Table 2 above.

automobiles, etc., all of which will work to stimulate additional economic activity and employment. Those workers will, in turn, also present economic demand, creating additional economic activity and jobs. So-called *multiplier effects* attempt to capture the total and recursive effects of a change, up or down, in direct economic activity, typically within a given geographic area. CM cite a multiplier of 2.56, which they apply to their direct estimate of \$4.97-billion in increase telecom sector expenditures, inflating their initial \$41.81-billion figure into a multiplier-adjusted \$54.19-billion.

CM's use of a *Regional Multiplier* to assess an economywide impact appears to be misplaced. BEA Regional Multipliers are developed as a means for assessing region-specific or industry-specific effects, which may not necessarily constitute economywide impacts. CM apply the telecommunications sector multiplier to what they describe as increased net overall expenditures on telecommunications that they posit will be made by consumers as a result of the reductions in usage-sensitive prices. But if such increased expenditures arise, they would most likely represent a *shift* in spending away from other economic sectors. In order to develop aggregate economywide multiplier effects, one would need to identify the net increase in telecom spending that is not offset by decreases elsewhere; CM have not done that. This requirement is underscored in the BEA RIMS II documentation:

When an activity of a new project competes with the existing regional activity, estimating the change in final demand is more difficult, because it is necessary to estimate how much of the new project's output replaces the existing output. For example, suppose a shopping mall is constructed in a region that already has similar shops. If a portion of the sales at the new mall would have occurred at the existing shops in the absence of the new mall, then the final-demand change due to the mall is only the net increase in regional sales. If in the extreme case, all of the sales at the new mall would have occurred at the existing shops, the final-demand change due to the mall is zero.³⁰

Another source of multiplier effects – one not considered by CM – arises from the potentially large telecom rate increases that the *Missoula Plan* portends for business, institutional and government customers. Inflating business telecom prices in ways unrelated to the actual costs of providing service has the potential to promote inefficient decisions both as to the choice of telecom service as well as to the use of telecom vs. other inputs in the firm's production process. Excessive telecom expenditures by an enterprise may result in diversion of capital away from what otherwise may be productive undertakings, potentially resulting in a variety of economic losses, including jobs and investments. Just as high energy costs can act as a drag on energy-intensive industries, so too can excessive telecom prices adversely affect telecom-intensive industries, the importance of which to the US economy is growing daily. Unfortunately, the CM model both ignores the increases in telecom prices that *Missoula* may impose upon business customers, and ignores the broader economic implications of such deadweight losses.

Failure to adhere to Missoula's "revenue neutrality" requirement. Separate and apart from its reliance upon flawed and unrealistic assumptions, the CM model appears also to violate a core attribute of the *Missoula Plan* – *revenue neutrality*. That is, the decreases in ILEC switched access charges are to be

30. Bureau of Economic Analysis, U.S. Department of Commerce, "Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II)," Third Edition, March 1997 ("RIMS II Handbook"), at 9.

offset, dollar-for-dollar, through corresponding increases in the SLC, USF contributions, and the Restructure Mechanism. The Executive Summary of the Plan makes this clear:

The Plan gives carriers an opportunity to recover lost intercarrier compensation revenues through supplemental sources of recovery. These sources include increased subscriber line charges (“SLCs”) as well as a new Restructure Mechanism, which is designed specifically to replace switched carrier-to-carrier revenues lost by carriers participating in the Plan and not otherwise compensated for that loss through end-user charges.³¹

AT&T has undertaken to model the dollar impacts of the various rate changes called for in the Plan. In describing its Model, AT&T notes:

The Missoula Group recognizes the importance of understanding the impacts of the proposed plan including estimating the size of the Restructure Mechanism. The main objective of the Modeling is to calculate the annual amount of the Restructure Mechanism (RM) that will be needed when switched access rates reach their final levels under the new plan. In an effort to develop the best estimate possible, the group undertook two independent modeling efforts. One modeling effort was led by AT&T experts; the other modeling effort was led by the Rural Alliance experts.³²

As Table 10 indicates, however, the data inputs to the CM model are decidedly *not* revenue-neutral. Ignoring the effects of demand stimulation – which was not considered in the AT&T Model and is not accounted for under the *Missoula* restructuring – CM put total post-transition access charge reductions at \$8.4-billion offset by only \$6.8-billion in SLC, USF and RM increases – i.e., an ongoing annual net revenue decrease of some \$1.6-billion. When their demand stimulation adjustments are factored in, the net annual revenue decrease escalates to \$2.4-billion following the completion of the transition. Obviously, consumers will benefit from a net decrease in payments to telecom carriers, but no such decrease is contemplated in the *Missoula Plan* itself. CM neither acknowledge nor explain the basis for this fundamental disconnect.

31. the *Missoula Plan Executive Summary*, at 1. The use of “carriers” here is overly broad, since “opportunity to recover lost intercarrier compensation revenues through supplemental sources of recovery” is not being afforded to, or assured for, CLECs.

32. Based upon the results of the AT&T and Rural Alliance modeling efforts, total RM, including CLEC RM, is expected to fall in the range of \$1.4- to \$1.6-billion. In addition, the *Missoula Plan* contemplates increases in other Universal Service programs totaling \$725-million. Including the projected SLC increases, this would result in roughly \$6.9-billion, which would then exceed the ILEC access charge reductions by about \$900-million. Executive Summary, at p. 13 and footnote 12.

Table 10

The Rate Rebalancing underlying the Clarke/Makarewicz Model is Not Revenue Neutral

After phase-in period	Missoula Group-- AT&T model	CM-no demand stimulation	CM-with demand stimulation
Decrease in annual ILEC access charge revenue	\$6-billion	\$8.4-billion	\$9.2-billion
Increase in SLCs	\$4.7-billion	\$6.8-billion	\$6.8-billion
Increase in USF/RM	\$1.3-billion		
Net increase (decrease)	\$0	(\$1.6-billion)	(\$2.4-billion)

V. Conclusion

The *Missoula Plan* for intercarrier compensation reform will almost certainly impact consumers economywide, and assessing these impacts (whether negative or positive) is a critical element in evaluating the overall reasonableness of the Plan. The model as developed by Clarke and Makarewicz could potentially be useful for gauging the end-result of the *Missoula Plan*, but only if the underlying assumptions and input data were valid, which is clearly not the case. Here, the specific scenario they have examined is based upon fundamentally flawed assumptions and data (some of which directly contravene the Plan itself), producing a grossly overstated estimate of the economywide benefit of the Plan.

Critical to the CM model is its requirement that 100% of the access charge reductions prescribed by *Missoula* be flowed through to consumers in the form of lower prices. However, the Plan itself provides for no such mechanism, and the prevailing state of market concentration and integration make such flow-through extremely unlikely. But even if such flow-throughs occurred, the projected benefits would not occur because the CM model is riddled with other unsupportable assumptions. CM assume that states adopt and immediately implement voluntary *Missoula* access charge reductions. CM rely upon own-price elasticities of demand for toll and wireless services that were developed in the distant past and that are clearly no longer applicable to current pricing and market conditions. CM also assume that all toll and wireless minutes are priced and sold on a per-minute basis, ignoring the preponderance of block-of-time and unlimited usage plans. All of these assumptions, individually and in combination, contribute to a grossly exaggerated assessment of *Missoula's* economic benefits. CM also misapply regional multiplier effects that further inflate those overstatements of consumer benefits. When the various flawed assumptions are replaced with more realistic inputs, rather than showing a \$54-billion consumer benefit, the model suggests that adoption of the *Missoula Plan* could result in massive *negative* economic impacts in the range of \$39- to \$44-billion. Finally, if incumbent LECs and their parent corporations are enabled via *Missoula's* "revenue-neutrality" requirement to maintain – and, in fact, to significantly *increase* – their already excessive rate and earnings levels, they will have the ability to maintain and enlarge their already formidable economic war chest so as to cross-subsidize entry into new markets and new technologies, further distorting economic choices as between incumbent and competitor services. Clarke and Makarewicz have not accounted whatsoever for this potentially enormous source of economic loss.